

AMENDMENT TO THE DRAWINGS

Fig. 1 has been amended. The attached sheet of formal drawings replaces the original sheet including Figs. 1-6.

REMARKS/ARGUMENTS

Claims 1-16 are pending in the instant application. In the most recent Office Action Fig. 1 is objected to for lack of a "Prior Art" legend. Claims 3, 5 and 6 were objected to because of minor informalities. Claims 1 and 2 were rejected under 35 U.S.C. §102(e) as being anticipated by Head, U.S. Patent No. 6,323,420. Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Head, U.S. Patent No. 6,323,420.

In response, as amended above, Fig. 1 now includes a "PRIOR ART" legend as prescribed by the Examiner. Additionally, claims 3, 5 and 6 are amended to correct the dependency clause in each. No substantive change is intended by these amendments, nor should they be interpreted to alter the scope of the claims. Favorable reconsideration and withdrawal of the objections is kindly requested.

Turning the to the merits of the claims, Applicant respectfully traverses the rejections, for at least the following reasons. Although the statement of rejection under 35 U.S.C. § 102(e) names only claims 1 and 2, the text of the Office Action addresses claims 1-4 and 6-14 as if all were rejected on the same grounds. Therefore, Applicant responds for all those claims.

Claim 1 recites a rigid pipe of a reelable type comprising, *inter alia*, at least one electrical heating cable extending through the pipe wherein the cable is capable of undergoing an elongation of at least 0.5% without damage. Accordingly, the wires may be made shorter than those of the prior art, to reduce electrical resistance and increase power for a given voltage, or alternately a longer length pipe can be serviced with the same voltage. The Office Action avers this feature is inherently taught by Head, at Col. 5, lines 31-40, because the cables of Head are allegedly made from similar material and therefore posses the same characteristics. Applicant respectfully disagrees.

The cited portion of Head states:

When the coiled tubing 20 is coiled, the cables' helical form allows the cables to move apart somewhat at the outer circumference of the circular shape formed by the coiled tubing. The cables are able to do this because of the slack present in the helical shape. In this way, less strain is put on the cables during the reeling and unreeling of the coiled tubing. The resilience of the structural cable also resists movement of the carrier

tube and power cables relative to the coiled tubing, securing the cables within the coiled tubing and reducing the load upon them.

Col. 5, lines 31-40

Initially, the cited portion of Head does not describe the structure or material of the cables, but rather describes their arrangement or orientation and its effect. However, there is no similarity between the orientation of the cables as disclosed in Applicant's specification and the Head reference. For example, as described in the specification, and recited in dependent claim 10, the cable is no longer than the pipe through which it passes. In contrast, because of the helical winding of the cable in Head, the cables are significantly longer than the pipe they pass through. Neither is there any similarity between the cited reference and the claimed invention in the structure of the cables themselves. Therefore, the alleged similarity of structure which is the basis for the Office Action's claim of anticipation by inherency is simply not present.

The cited portion of the reference describes the helical orientation of the various power and structural cables around the carrier tube (40). Head explicitly teaches away from the claimed invention, and instead describes what was disclosed in Applicant's own specification as the prior art to be overcome.

Head explicitly states, and one of ordinary skill in the art would intuitively recognize, that the cables are able to move apart from one another, not because of any capacity to elongate, but because of the slack present in the helical shape. Much like a wire coil spring, as the pipe is deformed, for example by reeling, each coil of cable moves closer to or farther from one another, but the length of the cable itself remains unchanged. Therefore, there is no explicit teaching in Head that the cable is capable of undergoing any measure of elongation. Neither is there any implicit suggestion in Head of elongation in the cables. Rather, the structure of Head accommodates any flexure of the pipe by arranging the cables in a helix which absorbs the relative motion by moving elements of the helical structure.

To support a *prima facie* case of anticipation by inherency, the limitation in question must "necessarily" be present in the prior art reference. See, *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999) "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the

allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). See also, *Akamai Technologies, Inc. v. Cable & Wireless Internet Services, Inc.*, 344 F.3d 1186, 68 USPQ2d 1186 (Fed. Cir. 2003) ("A claim limitation is inherent in the prior art if it is necessarily present in the prior art, not merely probably or possibly present.") In this case, the Head reference does not necessarily exhibit the characteristics attributed to it in the Office Action. Rather it is only unfounded assumption on the part of the Office Action that the claimed features are present in the reference.

Therefore, Applicant respectfully submits that claim 1 is patentably distinguished over the prior art reference, and kindly requests favorable reconsideration and withdrawal of the rejections. Claims 2-14 each depend, either directly or indirectly, from independent base claim 1. These dependent claims are each separately patentable, but are offered as patentable for at least the same reasons as their underlying independent base claim. Therefore, Applicant kindly requests favorable reconsideration and withdrawal of the rejection.

However, speaking specifically to the dependent claims, Applicant's remarks regarding the lack of inherency of the features of claim 1 apply with equal force to the features recited in claims 2 and 14, which are similarly lacking from the reference. There is no reason offered in the Office Action nor in fact to presume these features are present in Head. Therefore, claims 2 and 14 are further patentably distinguished over the reference.

Referring to claim 3, this claim recites that the cable is disposed parallel to a longitudinal axis of the pipe. The Office Action avers that this feature is shown at Fig. 5 of Head. Applicant respectfully disagrees. In contrast to the assertions of the Office Action, Fig. 5 most clearly illustrates that the cable (e.g., 30) is wound helically around the carrier tube (40), and is therefore not parallel with a longitudinal axis. Therefore, claim 3 is further patentably distinguished over the cited reference.

Referring to claim 8, this claim recites, *inter alia*, a sealing member in the annular space between coaxial pipes. The Office Action alleges this feature is taught at Fig. 5. Fig. 5 of Head shows only braided cable (e.g., 30) helically wound around a carrier tube (40). The cables are not sealing members and do not, nor are they alleged in the reference to perform any sealing

function. Rather, because they are helically wound, fluid is unimpeded longitudinally along the pipe (20). Therefore, claim 8 is further patentably distinguished over the cited reference.

Referring to claim 9, this claim recites, *inter alia*, an electrical supply circuit to the cable, at different locations of the electrical supply circuit, connection boxes for automatically locally re-establishing connection between the phases of the circuit in the event of a failure of the circuit. The Office Action alleges this feature is taught at Fig. 28 of Head. Applicant respectfully disagrees. Head discloses at Fig. 28, with reference to Col. 10, lines 1-12, that a conducting member (130) is arranged in a sinusoidal path as opposed to helical path, which would envelop the tube (135) in a manner easier to apply than a helix. Head goes on to state that three cables can make up the conducting member (130). However, there is no teaching or suggestion in Head of a connection box to automatically locally re-establish connection between the phases of the circuit in the event of a failure of the circuit. Therefore, claim 9 is further patentably distinguished over the cited reference.

Referring to claim 10, this claim recites that the cable extends parallel to the pipe, and not being longer than the pipe to which it passes. The Office Action alleges this feature is taught at Fig. 12 of Head. Applicant respectfully disagrees. Fig. 12 illustrates a manner of securing power cables (70, 71, 72) by helically winding with expandable tubes (80, 81, 82). However, in contrast to the feature recited in claim 10, the helical winding in Head clearly shows that the cable is not parallel to the pipe, because it is helically wound. Neither is it no longer than the pipe, it is in fact longer, because of the additional length required to form the helix. Therefore, claim 10 is further patentably distinguished over the cited reference.

Turning then to the rejection of claim 5 as allegedly obvious over Head alone, this claim is at least distinguished because the proposed modification of Head does not ameliorate the underlying deficiency with respect to independent base claim 1, addressed above. Moreover, the Office Action admits that Head does not teach a flat cable, but alleges that it would have been obvious to one of ordinary skill in the art to use a flat cable, because flat cables are well known.

It has long been held by the Courts that in order to establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the references. *See, In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). The absence of such a

suggestion is dispositive in an obviousness determination. *See, Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1579 , 42 USPQ2d 1378, 1383 (Fed. Cir. 1997). "The showing of a motivation must be clear and particular, and it must be supported by actual evidence." *Teleflex, Inc. v. Ficosa North American Corp.*, 299 F.3d 1313, 63 USPQ2d 1374 (Fed. Cir. 2002) (Citing *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)).

In the present case, the Office Action fails to even offer a motivation for one of ordinary skill in the art to modify Head by substituting a flat cable, much less to cite any evidence in support of the motivation. Therefore, Applicant respectfully submits that the rejection of claim 5 is poorly taken, and kindly requests favorable reconsideration and withdrawal.

Also presented by the above amendment is new claim 15. Claim 15 depends from independent claim 1, and recites the electrical cable being rectilinearly disposed along the pipe. This amendment is fully supported throughout the original specification as filed for example at, among other places, p. 4 lines 4-12. No new matter has been added. Head discloses that cables are helically wound around the inner pipe. In contrast, claim 15 recites a rectilinearly disposed electrical cable. Therefore, Applicant respectfully submits that claim 15 is further distinguished over the cited references.

Also presented by the above amendment is new claim 16. Claim 16 depends from independent claim 1, and recites the electrical cable is capable of bearing compression while remaining in contact with the pipe. This amendment is fully supported throughout the original specification as filed for example at, among other places, p. 4 lines 18-20. No new matter has been added. As disclosed in the specification, this feature now recited in claim 16 has the advantage of avoiding detachment from the pipe, which would reduce the effectiveness of the heating system. New claim 16 is further distinguished over Head.

In light of the foregoing, Applicant respectfully submits that all claims recite patentable subject matter, and kindly solicits an early and favorable Notice of Allowance.



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